

Relationship between Board Composition and performance of Commercial Banks in Kenya

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Abstract

Commercial banks play a critical role in mobilization of resources from surplus to deficit units required to foster economic growth and development especially in developing countries. Although, in quite a number of these countries the need for development of sound corporate governance has been recognized as critical in enhancing stability in the banking sector, research on the links between governance at firm level and corporate performance in commercial banks has been scanty. This paper has explored this issue, paying particular attention on the relationship between corporate board independence and the performance of commercial banks in Kenya for the period spanning 2001 to 2013. A period within which Central Bank of Kenya (CBK) issued three prudential guidelines on corporate governance that all commercial banks operating in Kenya must adhere to.

Primary data for the study was obtained from 33 of the 43 commercial banks in Kenya by way of questionnaire administration, whereas secondary data was obtained from: annual published accounts, Nairobi Stock Exchange Publications, returns filed to the Registrar of companies at the Attorney General Chambers Nairobi, individual banks websites and Central Bank of Kenya website. Bank performance was defined by three key performance variables namely: ROA (Return on asset), ROE (Return on equity) and TBQ ratio (Tobin's Q ratio); that are: financial, accounting and market measures of performance respectively. Bank size was adopted in the study as a moderating variable to capture bank specific characteristics. The data collected was analyzed using hierarchical regression under the panel data framework using SPSS 21.0 version. The key results indicated that board composition was not significant in the relationship between board composition and performance of commercial banks in Kenya. The results further indicated that there was no linear relationship between board composition and the TBQ ratio of commercial banks in Kenya when bank specific characteristics were excluded. Therefore if commercial banks in Kenya are to improve their performance they should direct their efforts towards other variables other than board composition.

Keywords and abbreviations: Board composition, Banks performance, Corporate Governance, Central Bank of Kenya.

V.I.F. is Variance inflation factor, ROE is return on equity, ROA is return on asset, and TBQ ratio is Tobin's Q ratio

1. Introduction

The directors of corporate boards have been the focus of quite a number of management and finance studies for over a century and continue to provide a rich base to governance-performance literature. Corporate governance studies in banking firms their effects on performance have received less attention compared to related studies in industrial firms (Belkhir 2008). Understanding board composition in the banks is critical in understanding the ability of these boards to deliver on various parameters that can foster performance. It is also a basis upon which proposed reforms in board selection can be evaluated too. All the main theories of governance, whether shareholder or stakeholder-focused, point to the fact that boards of directors of a company are the cornerstones of good governance. Nevertheless, despite the unwavering interest and voluminous research into the relationship between corporate boards and firm performance, empirical results display a remarkable lack of consensus (Zajac & Westphal, 1996).

2. Review of related literature

Corporate governance can generally be defined as "the sum total of organizational mechanisms geared towards limiting the managers' powers and influence in decision making process; notably these related to funding and investment (Pichet, 2013). The ways a firm invests shareholders funds determines its performance and goes a long way in determining its ability to achieve its objectives. Board composition denotes the percentage of board

members who are employees of organizations (internal board members) and those who are outsiders. Outside directors are at times referred to as independent directors or non-executive directors they do not participate in the day to day running of the company (Enobakhare, 2010). Independent directors hold a special status as leading protagonists in companies' boards (Pichet, 2013).

The focus on board independence is grounded in the agency theory (Fama and Jensen, 1983). From the banking sector perspective, board composition is expected to play an important role in synchronizing the interest of managers and those of the shareholders. It is widely argued that the presence of directors who are not employees of the bank may enhance the effectiveness of the board in monitoring managers, and hence improve bank value and performance. This is because independent directors are more likely to defend the interests of external shareholders better compared to internal directors. Weisbach (1988) in the study of the efficiency of Chief Executive Officer monitoring mechanism between inside and outside directors finds that: outside directors play an important role in monitoring the Chief Executive Officer and are more likely than inside-dominated board of directors to replace a non performing Chief Executive Officer. The banks' corporate governance system is based on three principles: to receive non-confidential information on how the bank is functioning, to effectively control the bank and its managers through deliberations in general meetings and to foster banks' long-term interests in tandem with those of the shareholders; more specifically shareholders wealth maximization. These three principles can well be achieved when a great proportion of the bank's board of directors are independent.

The corporate governance structure of banks in Kenya as provided by the prudential guidelines issued by the Central bank of Kenya requires that the number outside directors be more than that of the executive directors. The non-executive directors must comprise of independent directors appointed on the basis of experience, gender and professionalism that can bring a different inputs to counter the problems faced by the management that generally constrain bank performance. Independent board of directors should serve a valuable advisory role that is likely to be particularly important in such complex firms. Fama & Jensen (1983) argue that outside directors have the incentive to act as monitors of management and hence improve firm performance because they would want to protect their reputations as effective independent decision makers. The basic argument has been that if board composition, as represented by independent directors, is to affect the banks performance positively, it should be inversely related to earning management and in the same context; if board composition negatively influences corporate performance, then it should positively influence the opportunistic behavior of managers (Hassan, 2012).

Shems *et al.* (2007) finds that the more the board is independent, the better the performance of Thai banks. The above findings are supported by those of Kor & Misangyi (2008) that; the presence of outside directors who have significant managerial and industrial experience compensate for inadequacy of management experience in young firms. This is in line with the resource dependency theory that advocates for the fresh ideas that the board of directors working for different organizations and sitting on the boards of many organizations will inject in the firm and hence boost their performance. Busta (2007) while examining a sample of 69 listed banks from France, Germany, Italy, Spain and UK over the period spanning 1996 to 2005 and a sample of 125 banks operating in 15 European union member countries and Switzerland during 2004 finds that; banks with a higher number of independent directors perform better in terms of the market-to-book value and return on invested capital (ROIC) in the Continental Europe, while the opposite is true for UK where no significant correlation was detected in terms of ROA. Brook *et al.* (2000) while examining the impact of corporate governance and pay-for-performance on earnings management using 100 largest firms in the U.S. as ranked by Standard and Poor between 1994-2003 find that outside directors' enforce managers to act in the interest of shareholders by accepting takeover bids that are high. Brewer III *et al.* (2000) find that bid premiums offered for target banks increase with the proportion of independent outside directors.

Committee memberships in the banking firms are incomplete in absence of independent directors of the board. Hence, it is expected that banks should have a large proportion of independent directors than firms in other sectors of the economy (Central Bank of Kenya, 2013). From the above argument, it is expected that the relationship between board independence and firm performance should be positive. Ferris *et al.* (2003) in examining the number of external appointments held by corporate directors finds that there is no evidence that calls for limits on directorships held by an individual. Brewer III *et al.* (2000) find that bid premiums offered for target banks increase with the proportion of independent outside directors.

Hartarska, (2005) examined the link between the governance mechanisms and performance of micro finance institutions in Central and Eastern European countries. The findings of the study were that: boards with greater external representation have better financial performance. Similar findings were made by Hartarska & Mersland (2012) and Mori & Mersland (in press), who used a large sample to study which governance measures promoted efficiency in reaching poor clients. Using the agency and stakeholder theories as a basis for their arguments, they looked at measures such as board size, board composition and managerial composition. Their findings were that micro finance institutions with a larger proportion of insiders on the board are less efficient.

On overall they concluded that micro finance institutions boards with many internal members do not impact on social and financial performance of a firm

Despite the above positive effects that accrue to banks and firms with the existence of a high proportion of independent directors in the board. Several studies have reported findings to the contrary. Fich & Shivdasani (2006) find that weak corporate governance is related to the presence of directors involved in more than three boards although a firm may not have the knowledge and control on the number of boards a director could be serving. Cornet *et al.* (2007) find that the presence of independent outside directors reduces earnings management because independent boards constrain managers' discretionary behavior that may be geared towards improving firm performance. Similar findings were made by Roodposhti & Chashmi (2010) in a study of 196 firms listed on Tehran Stock Exchange in Iran between 2004-2008, that a negative relationship exists between board independence and earnings management. Outside board of directors were also found to have a disadvantage that they may lack relevant firm-specific information which is likely to be problematic especially for small growth firms (Adams and Ferreira, 2007).

Insider directors have three major advantages over outsiders on the company's board. They are better informed about the issues and problems affecting the firm's business (Hilman and Dalziel, 2003). This may explain the reason why empirical evidence supports the fact that there is no correlation between the number of outside directors and the financial performance of the firm (Hermalin and Weisbach, 2003). The second important advantage is underlined in the fact that inside directors do lessen the board's dependence on Chief Executive Officers for supply of information. This is because they are able to provide the board with a well-informed source of inside information that has not been filtered by the Chief Executive Officers and thirdly inside directors normally have superior explicit and tacit knowledge, on specific issues and problems facing the firm. Sanders & Boivie (2004) while referring to internet firms find that; in the post-IPO stage, the market prefers insider-dominated boards because they have greater access to the kind of information that is subjective regarding the top-management performance and may be more useful when information processing at the board level is critical.

Child & Rodrigues, (2004) find that inside directors have the ability to mitigate the problem of double agency-relationship that take the form of conflicts between the owners and management and conflicts between the management and employees including the inability of outside directors who are Chief Executive officers of other firms to seriously challenge the firm's policies especially those related to the remuneration of executives. It widely acknowledged that outside Chief Executive Officers serving as board of directors in other companies normally view the board through Chief Executive Officer eyes in a manner which does not seriously challenge the power of the incumbent Chief Executive Officer. O'Reilly *et al.* (1988) in their study find that, as far as the Chief Executive Officer compensation are concerned, the pay of the compensation committee members were a better predictor of the Chief Executive Officers compensation than the actual performance of the firm. Therefore the membership of employees in the compensation committees would have a moderating effect upon the mutual hiking of compensations by the cross-board membership by outside Chief Executive Officers who are board members. These findings are in line with those of Berle & Means (1932) that corporate boards had neither the incentive nor the ability to objectively represent the interests of shareholders rather than providing independent oversight for top management decision making processes, and would simply rubber stamp the executive decisions.

Considering the relationship between financial performance and board composition, Hermalin & Weisbach (1991) in their study on the effect of board composition on financial performance of listed companies in the United States using a sample of 142 companies listed on the New York stock exchange and pooled data of five years found that there was no strong relationship between board composition and firms' financial performance. According to them board composition simply does not matter since both Inside and outside directors are equally bad or possibly good at representing shareholders' interests. These findings were supported by Dalton, Daily *et al.* (1998) that little correlation existed between board composition and corporate financial performance among 54 empirical studies they had undertaken and that no correlation existed between leadership structure and financial performance among 31 empirical studies they had undertaken too.

Pi and Timme (1993) and Adams & Mehran (2002) find that the proportion of outside directors is not related to performance measures because the presence of outside directors on the firm's board entails costs to the firm, that take the form of fees, travel expenses, stocks and stock-options. They recommended that banks should use higher numbers of outside directors only when the other corporate control mechanisms are weak. Shah *et al.* (2009), in their study on the relationship between board composition and earnings management in Pakistani listed companies for the period between 2003 and 2007 also find no significant relationship between board composition and earnings management.

Boone, Fields, Karpo & Raheja (2007), Coles, Daniel & Naveen (2008), Lehn, Patro & Zhao (2008) and Linck, *et al.* (2008) provide evidence in samples of non-financial firms that the proportion of outsiders on the board is positively related to measures of firm complexity, such as size. Peng (2004) on the other hand

suggests that outsider directors do make a difference in firm performance, if such performance is measured by sales growth, though they have little impact on financial performance such as return on equity (ROE).

Overall, it is expected that if board independence can constrain managers to play along the line of shareholders' wealth maximization objective, then it should be positively related to firm performance when the true financial performance is considered rather than the reported earnings that is marred by the impact of earnings management captured in annual financial reports.

3. Research Methodology

The primary aim of the study was to analyze the relationship between corporate governance and performance of commercial banks in Kenya for the period spanning 2000 to 2013. To achieve the general objective of the study, a survey was conducted on all banks incorporated and operating in Kenya during the period. The target population for the study was the Company Secretary or a Senior Manager in charge of Corporate Affairs at each of the 43 commercial banks head offices. The study made use of annual audited financial reports of individual banks found on the banks website and the Central Bank of Kenya website, returns filed at the Registrar of Companies office at the Attorney General Chambers Nairobi and Nairobi Securities Exchange publications. Primary data was collected using a questionnaire that was administered to either the Senior Manager in charge of Corporate Affairs or the Company Secretary. This was in line with the advocacy of the Basel Committee on Banking and Supervision that governance structure should be composed of board of directors and Senior Management (Al-Manaseer *et al.*, 2012). The questionnaire was used in gathering general information on board composition variable that had not been captured in the annual financial reports.

A pilot study was conducted on one bank that was picked through random sampling to which the questionnaire was administered to the Senior Manager in charge of Corporate Affairs. This exercise was done before the main data collection exercise commenced. The rule of the thumb that 1% of the respondents should be picked for a pilot study as recommended by Nachmias & Nachmias (2008) and Sekaran & Bougie, (2009) was applied. The contents of the questionnaire were thoroughly discussed with the respondent with a view of identifying any shortfall in the instrument. Issues raised in respect to measurement were adjusted without changing the meaning. However, the pilot study sample was not allowed to participate in the main study.

The reliability of the questionnaire was evaluated using Cronbach's alpha coefficients. Cronbach's alpha coefficients are used in measuring the internal consistency of the questionnaire instrument. The value of the alpha coefficient ranges from 0-1.

$$\alpha = \frac{n}{n-1} \left(1 - \frac{\sum V_i}{V_{test}} \right)$$

The Alpha Cronbach's formula is as given :

Where α - Cronbach's Alpha.
 n - The test lets (number of items to be tested).
 V_i - Variance of observed total test scores.
 V_{test} - Total variance of overall scores on the entire test (not % s)

A higher alpha value shows a higher level of reliability. According to Coopers and Schindler, (2008), an alpha value of 0.7 and above is an acceptable reliability coefficient. Since secondary data was drawn from the published annual financial reports of banks, they were presumed to be reliable.

The data collected was analyzed using descriptive and inferential statistics. Under inferential statistics, hierarchical regression analysis under the panel data framework was used. Hierarchical regression analysis was used in determining the relationship between board composition variable and performance variables. The study measured the goodness to fit the regression model for Return on equity, Return on Assets and Tobin's Q ratio using r-squared value. The research also observed significant P-value. Descriptive statistics were used to quantitatively describe the important features of the variables using mean, maximum, minimum and standard deviation.

3.1 Model Specification and Variable Definition

The researcher employed a hierarchical regression model of analysis under the panel data framework. That was as follows:

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it}$$

$$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \epsilon_{it}$$

Where:

Y_{it} - Is bank performance measured by Return on assets, Return on Equity and Tobin's Q ratio.

Subscripts i and t represent firm and time period, respectively.

β_0 - The intercept of the model.

X_1 - Board composition. Calculated as the number of non executive directors divided by the total number of directors.

X_2 -Moderating variable bank size measured by log of total assets.

ε_{it} -Is an error term.

The empirical model included bank size as a moderating variable related to bank specific characteristics. Related studies such as: Htaly, (2012) and Bino & Tomar, (2007) had used this variable. In their studies. Only one bank specific characteristic; bank size was used in the model. Other characteristics were captured by the error term.

3.2 Independent Variables and Dependent Variables

Board composition was the independent variable in the study whereas the dependent variables constituted of three performance measures namely:

- (1) Tobin's Q ratio: This is a market measure of performance given by the formula

$$\text{Tobin's Q (TOBQ)} = \frac{\text{Market value of Equity}}{\text{Net worth of the firm}}$$

Where market value of equity is the difference between the market value of the firm and the value of debt and net worth is the amount by which the assets exceed the liabilities.

For unquoted banks the researcher calculated the estimated market value of their shares based on the formula: similar characteristics to the quoted one in terms of share holders

$$\text{Est. Mkt value of equity of unquoted bank} = \text{Current price of quoted bank} \times \frac{\text{Own funds (of unquoted bank)}}{\text{Own funds (of quoted bank)}}$$

Where Est. Mkt value of equity of unquoted bank- is estimated value of equity of unquoted bank.

Where Est. Mkt value of equity of unquoted bank: Is estimated market value of unquoted bank.

Both the numerator and the denominator were measured at the same date.

- (2) Return on Equity (ROE): This is a financial measure of performance it indicates how effective the management team in a company is converting the reinvested money into profits. The higher the company's ROE the more the money a company is able to generate for the same shilling amount spent.

$$\text{ROE} = \frac{\text{Net income (Profit after tax)}}{\text{Shareholders' equity}}$$

Where - The profit before tax is as listed in the company's annual financial report.

-Shareholders equity=Total assets-Total liabilities (CBK 2001-2013)

- (3) Return on Assets. This is a purely accounting-based measure computed from the banks financial statement data. Each bank's earnings after tax are divided by total assets (CBK 2001-2013).

$$\text{ROA} = \frac{\text{Profit before tax}}{\text{Total assets}}$$

4. Findings

The Cronbach's alpha of items on board composition that were responded to via the questionnaire was 0.788. These values were above the 0.70 threshold as recommended by Zinbarg, (2005) implying that the data collected had achieved a relatively high level of consistency and could be generalized to be representative of the target population and could be used for further analysis.

However it was observed that board composition had 18 items. Given the higher number of variables this variable was subjected to factor analysis so as to reduce the number of items required for analysis. Factor analysis technique was considered appropriate because it did not require any preexisting functional relationships in the data and it is well known for data reduction.

4.1 Testing Adequacy of sample for factor analysis

Kaiser-Meyer-Olkin measure was used in testing the sampling adequacy of the data collected on board composition using the questionnaire for factor analysis. This measure ranges between 0 and 1. The K.M.O. values closer to 1 are considered better whereas the value greater than 0.5 are considered adequate (Leech *et. al* 2005). Along with this measure, the Bartlett's Test of Sphericity was used in testing the null hypothesis that the correlation matrix had an identity matrix. The results of these two tests were used in determining the minimum standard required to proceed with factor analysis. To aid in the analysis the table 4.2 below was generated.

Table 1 KMO Bartlett's Test

Particulars	Values
Kaiser Meyer-Olkin Measure of sampling adequacy	.596
Approximate chi square	328.363
Barlett's Test of Sphericity Df	153
Sig.	.000

Normally, if $0 < KMO < 1$ and if $KMO > 0.5$, the sample is adequate. From the results obtained in table 1 above KMO was 0.596 and the Bartlett's Test of Sphericity at 95% level of confidence was significant (the p-value of $.000 < 0.05$). The results indicated that the items were adequate for factor analysis and hence paved way for the researcher to proceed with the factor analysis.

Factor analysis process on this data led to the retention of the six of the initial eighteen items.

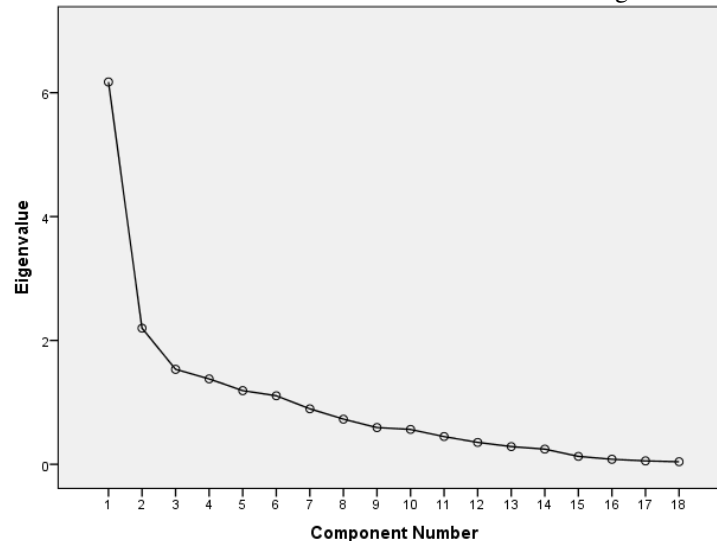


Figure 1 Scree plot

The fact that six of the eighteen items were retained for further analysis was supported by the break in the scree plot after the sixth item as shown in figure 1 above.

Table 2 Communalities of board composition variables

Board composition factors	Initial	Extraction
Whether the board is truly independent	1.000	.798
Board has the responsibility of selecting the banks CEO	1.000	.792
Board is a forum of serious discussions	1.000	.857
Board has ability to revise key executive decisions including remuneration	1.000	.835
Board reviews potential conflict of interest including related parties transactions	1.000	.815
Board ensures integrity of the bank's financial reporting	1.000	.884

The items that remained had factor loadings of between 0.792 and 0.884 as shown in table 2 above. Hair *et. al* (1998) and Tabachnick and Fidell (2007) recommend a cut off factor of 0.40 on factor loadings in determining the factors to be retained for further analysis. Given that all the six items had a factor loading above the 0.4 threshold they were all retained and used in further analysis. This paved way for further analysis and detailed discussion on board composition in the subsequent section of the study.

4.2 Descriptive statistics

Table 3 .presents some descriptive statistics regarding board composition and performance measures for commercial banks in Kenya over the period 2001-2013.

Table 3 Descriptive statistics

Particulars	N	Minimum	Maximum	Mean	Std Deviation
ROA	416	-.13	.37	.0259	.03829
ROE	416	-.67	1.25	.1238	.14974
TBQ ratio	416	.00	9.13	.9367	.14224
Bank size	416	2.88	5.51	4.1152	.60476
Board composition	416	.17	.92	.6747	.13890

From the data of 416 observations shown in table 3 above it can be revealed that with a board of which on average 67.47% of the directors were independent directors with a maximum of 92% and a minimum of 17%, that deviated by 13.89% both sides of the mean, Kenyan commercial banks reported an average return on asset of 2.59% with the highest/ maximum of 37% and a minimum of -13% that deviated by 3.823% on both sides of the mean. These banks also reported an average return on equity of 12.38% with a maximum of 125% and a minimum of -67% that deviated by 14.974% on both sides of the mean and an average Tobin's Q ratio of .9367, with a maximum of 9.13 and a minimum of zero that deviated by 1.42247 on both sides of the mean using

an average asset size of kshs.13,119 million (antilog. of 4.1179), with a maximum of kshs.323,594 million (antilog. of 5.51) and a minimum of kshs.759 million (antilog of 2.88) that deviated on both sides of the mean by kshs.4.03 million.

4.3 Hierarchical Regression

Hierarchical regression was used in the analysis of the relationship between corporate governance and board composition. The performance indicators used in the study were: ROA, ROE and Tobin's Q ratio taking into account the effect of bank size / a moderating variable on these performance indicators each at a time. The null hypothesis for the entry of the moderating variable (bank size) to the analysis was that the change in R^2 was zero. If the null hypothesis was to be rejected then the interpretation was to indicate that the variables in block 2 or step 2 had a relationship with the dependent variable after moderating of block 1 or step 1 variables to the dependent variable.

The statistical significance of the previously entered variables was not interpreted. Hierarchical regression analysis focuses on the change in R^2 . If the change in R^2 is statistically significant, the overall relationship for all independent variables will be significant as well.

To guide the analysis three simple definition models were adopted as illustrated:

Model 1:

Table 4. Model Summary^c

Model	R	R-Square	Adjusted R -Square	R-Square change	F change	df1	df2	Sig.
1	.049 ^a	.002	.000	.002	.982	1	414	.322
2	.270 ^b	.073	.069	.071	31.531	1	413	.000

- a. Predictors: (Constant) Board composition,
- b. Predictors: (Constant) Board composition, Bank size.
- c. Dependent variable: ROA

Table 5. Coefficients^a

Model	Unstandardized coefficients		Standardized coefficients	t	Sig.	Tolerance	V.I.F.
	B	Std Error	Beta				
1 (Constant)	.035	.009		3.718	.000		
2. Board composition	-.013	.014	-.049	.991	.322	1	1
1.(Constant)	-.034	.015		-2.218	.027		
2.Board composition	-.015	.013	-.054	-1.146	.253	1	1
3.Bank size	.017	-.003	.266	5.615	.000	1	1

- a. Dependent Variable ROA

In the first step of the hierarchical regression in model 1(Table 4), ROA is entered as a performance indicator and board composition as predictor variable. This model is found not to be statistically significant ($F(1,414) = .322$; $P > .005$) and the model explains .02% of variance in ROA. After entry of bank size in step 2 as a moderating variable the total variance explained by the model as a whole is 7.3% ($F(1,413) = 31.531$; $P < .05$). This represents an additional 7.1% variance in ROA (R^2 change= .071; $F(1,413) = 31.531$; $P < .05$). In the final model (Table 5) only bank size is statistically significant at 5% level whereas board composition, is not statistically significant.

Model 2.

Table 6. Model Summary^c

Model	R	R-Square	Adjusted R -Square	R-Square change	F change	df1	df2	Sig.
1	.060 ^a	.004	.001	.004	1.479	1	414	.225
2	.414 ^b	.171	.167	.168	83.587	1	413	.000

- a. Predictors: (Constant) Board composition,
- b. Predictors: (Constant) Board composition, Bank size.
- c. Dependent variable: ROE

Table 7. Coefficients^a

Model	Unstandardized coefficients		Standardized coefficients				
	B	Std Error	Beta	t	Sig.	Tolerance	V.I.F.
1 (Constant)	.168	.037		4.598	.000		
2. Board composition	-.065	.053	-.060	-1.216	.225	1	1
1.(Constant)	-.034	.053		-2.218	.027		
2.Board composition	-.074	.049	-.068	-1.525	.128	1	1
3.Bank size	.101	.011	.410	9.143	.000	1	1

a. Dependent Variable ROA

In the first step of model 2 (Table 6), ROE is entered as a performance indicator and board composition as predictor. This model is found not to be statistically significant ($F(1,414) = .225$; $P > .005$) and the model explains .04% of variance in ROE. After entry of bank size in step 2 as a moderating variable the total variance explained by the model as a whole rises 17.1% ($F(1,413) = 83.587$; $P < .05$). The introduction of bank size as a moderating variable explains an additional 16.8% variance in ROE (R^2 change = .168; $F(1,413) = 83.587$; $P < .05$). In the final model (Table 7) only bank size is statistically significant at 5% level. Board composition however, is not statistically significant at 5% level.

Model 3

Table 8. Model Summary^c

Model	R	R-Square	Adjusted R -Square	R-Square change	F change	df1	df2	Sig.
1	.006 ^a	.000	.002	.000	.014	1	414	.905
2	.563 ^b	.317	.314	.317	192.002	1	413	.000

a. Predictors: (Constant) Board composition,

b. Predictors: (Constant) Board composition, Bank size.

c. Dependent variable: TBQ ratio.

Table 9. Coefficients^a

Model	Unstandardized coefficients		Standardized coefficients				
	B	Std Error	Beta	t	Sig.	Tolerance	V.I.F.
1 (Constant)	.898	.347		2.586	.000		
2. Board composition	.060	.505	.006	.119	.905	1	1
1.(Constant)	4.473	.482		-9.273	.000		
2.Board composition	-.063	.418	-.006	-1.50	.881	1	1
3.Bank size	1.324	.096	.563	13.856	.000	1	1

a. Dependent Variable TBQ ratio

In the first step of model 3 (Table 8), TBQ ratio entered as a performance indicator and board composition as predictor variable. This model is found not to be statistically significant ($F(1,414) = .905$; $P > .005$) and is not able to explain the variance in TBQ ratio ($R^2 = 0$). After entry of bank size in step 2 as a moderating variable the total variance explained by the model as a whole rises to 31.7% ($F(1,413) = 192.002$; $P < .05$) and in this case the model is statistically significant. The introduction of bank size as a moderating variable explains an additional 31.7% variance in TBQ ratio (R^2 change = .317; $F(1,413) = 192.002$; $P < .05$). In the final model (Table 9) only bank size is statistically significant at 5% level. Board composition is found not to be statistically significant at 5% level.

The results of the regressions in the three models shows that board composition was not significant in the relationship between board composition and performance of commercial banks in Kenya when ROE, ROA and TBQ ratio were used as performance indicators.

The results of the study point to the fact that there is no linear relationship between board composition and commercial bank performance when TBQ ratio is adopted as a performance measure in absence of the moderating variable (bank size). This invariably means that when trying to ascertain the relationship between board composition and performance of commercial banks in Kenya one needs to take into consideration bank specific characteristics.. This may explain why TBQ ratio is not a popular indicator of performance in the Kenyan commercial banking sector. The above findings may also be attributed to the fact that out of the forty

three commercial banks operating in Kenya only eleven are listed. Data used in calculating TBQ ratio can reliably be drawn from the results of listed banks as opposed to non-listed banks. Bhagat and Black (2002) find no relationship between Tobin's Q ratio and board independence when financial statement data is used; whereas there is some relationship when stock return data is used.

The findings made when ROA and ROE were adopted as performance measures are in line with those of Coleman (2007) who finds no significant relationship at 5% level between board independence and performance of firms for the period between 1997 and 2001 in Kenya. Pi and Timme (1993), Adams and Mehran (2002) find that the proportion of outside directors on the board is not related to the performance measures because such outside directors entails costs to the firm. Love and Rachinsk. (2007) and Romano *et al.* (2012), also find no relationship between the presence of independent directors in the banks' board with their performance (ROE).

The results in the coefficients tables: 3, 5, 7 and 4.12 all indicate that Multicollinearity is not a problem. The tolerance levels are equal to 1 and the VIF values are perfectly below 10 an indication that the variables do not reach levels that indicate the presence of multi-collinearity. (Myers, 1990).

5. Conclusion

On overall the study finds that there is no significant relationship between board composition and performance of commercial banks in Kenya using the three performance measures (ROA, ROE and TBQ ratio). Therefore the proponents of board independence should note with caution that the presence of a high proportion of the independent directors on the banks board has no significant relationship with their performance. If the purpose of the board independence is to improve performance then such may not have any effect. Hence, policy makers and individual banks should consider other governance variables that can help improve banks performance. The above findings may explain why within a period of less than one and a half decades Central Bank of Kenya has released three prudential guidelines on corporate governance in the banking sector that stress on different variables from time to time. The results further indicate that the relationship between board composition as a governance variable and performance of commercial banks in Kenya in terms of TBQ ratio can only be correctly ascertained when the data used in its tabulation is drawn from the stock exchange but not through computations from annual financial reports.

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